

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/518, 470  
Source: PCT  
Date Processed by STIC: 03/06/2006

***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 03/06/2006

PATENT APPLICATION: US/10/518,470

TIME: 16:03:04

Input Set : A:\Sequence Listing\_26473U\_11-11\_05.txt  
 Output Set: N:\CRF4\03062006\J518470.raw

4 <110> APPLICANT: McGill University  
 6 <120> TITLE OF INVENTION: Oligonucleotide Inhibitors of MBD2/DNA  
 7 Demethylase and Uses Thereof  
 10 <130> FILE REFERENCE: 26473U  
 12 <140> CURRENT APPLICATION NUMBER: 10/518,470  
**C--> 13 <141> CURRENT FILING DATE: 2004-12-20**  
 15 <150> PRIOR APPLICATION NUMBER: 60/389,926  
 16 <151> PRIOR FILING DATE: 2002-06-20  
 18 <160> NUMBER OF SEQ ID NOS: 15  
 20 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
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 23 <211> LENGTH: 2584  
 24 <212> TYPE: DNA  
 25 <213> ORGANISM: Homo sapiens  
 27 <220> FEATURE:  
 28 <221> NAME/KEY: misc\_feature  
 29 <222> LOCATION: (0)...(0)  
 30 <223> OTHER INFORMATION: cDNA MBD2/dMTase  
 32 <400> SEQUENCE: 1  
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 34 agagggcgtg gccggggcca cggccggggc aggaggggcg ctctgtgcgc gcccgtcta 120  
 35 tgatgcttgc gcgcgcccc cgcgcgcgc gctgcggcg gggcggtct ccggattcc 180  
 36 aagggctcggttacggaaga agcgcagcgc cggctggga gggggctgga tgcgcgcga 240  
 37 cccgggggggagccgctgct gcccggagca ggaggagggg gagagtgcgg cggggcgca 300  
 38 cggcgctggc ggcgactccg ccatacgacca gggggccag ggcagcgcgc tcgccccgtc 360  
 39 cccgggtgagc ggcgtgcgc gggaaaggcgc tcggggcgc ggcgtggcc gggggcggtg 420  
 40 gaagcaggcg ggcggggcg gccgcgtctg tggccgtggc cggggccggg gccgtggccg 480  
 41 gggacgggaa cggggccggc gccggggcccg cggccgtccc ccgagtggcg gcagcggcct 540  
 42 tggcgccgac ggcggccgct gggcgccgg cggcagcgg ggcggccggc ccccccggcg 600  
 43 ggagccggtc ctttcccgt cggggagcgc gggccgggg cccagggac cccggccac 660  
 44 ggagagcgaa aagaggatgg atgcggccgc cttcccccc ggtatgaaaga aggaggaagt 720  
 45 gatccgaaaa tctggctaa gtgctggcaa gagcgatgtc tactacttca gtccaaagtgg 780  
 46 taagaagttc agaagcaagc ctcagttggc aaggtacctg gaaataactg ttgatctcag 840  
 47 cagtttgcac ttcaagaactg gaaagatgtatgcctagtaaa ttacagaaga acaaacagag 900  
 48 actqcgaaac gatcctctca atcaaaaataa ggttaaaccg gacttgaata caacattgcc 960  
 49 aatttagacaa acagcatcaa tttcaaaaca accggtaacc aaagtccacaa atcatcctag 1020  
 50 taataaaagtg aaatcgacc cacaacgaat gaatgaacag ccacgtcagc ttttctggga 1080  
 51 gaagaggcta caaggactta gtgcatcaga tgtaacagaa caaattataa aaaccatgg 1140  
 52 actacccaaa ggttcaag gatgggtcc aggtacgtat gatgagaccc ttttatctgc 1200  
 53 tggccagt gcttgcaca caagctctgc gccaatcaca gggcaagtct ccgctgctgt 1260  
 54 ggaaaagaac cctgctgttt ggcttaaacatctcaaccc ctctgcaaaatgtt 1320  
 55 cacagatgaa gacatcagga aacaggaaga gcgagttacag caagtacgca agaaattgga 1380  
 56 agaagcactg atggcagaca tcttgcgcg agctgctgat acagaagaga tggatattga 1440

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57 aatggacagt ggagatgaag cctaagaata tgcattcggta actttcgacc gacttcccc 1500  
 58 aagagaaaat tccttagaaaat tgaacaaaaaa tggttccact ggctttgcc tgtaagaaaa 1560  
 59 aaaatgtacc cgagcacata gagctttta atagcactaa ccaatgcctt tttagatgta 1620  
 60 ttttgatgt atatatctat tattcaaaaa atcatgtta ttttgagttc taggactaa 1680  
 61 aattagtctt ttgtaatatc aagcaggacc ctaagatgaa gctgagctt tgatgccagg 1740  
 62 tgcaatctac tggaaatgta gcacttacgt aaaacattt gttccccac agtttaata 1800  
 63 agaacagatc aggaattcta aataaattt ccagttaaag attattgtga cttcaactgta 1860  
 64 tataaacata ttttatact ttattgaaag gggacacctg tacattctt catcatact 1920  
 65 gtaaagacaa ataaatgatt atattcacag actgattgga attcttctg ttgaaaagca 1980  
 66 cacacaataa agaaccctc gttagccttc ctctgattt cattcaactc tgatccctgg 2040  
 67 gccttaggtt tgacatggag gtggaggaag atagcgcata tatttgagt atgaactatt 2100  
 68 gcctctggac gttgtgagaa ttgtgcttcc accagaattt ctaagaattt ctgctaaata 2160  
 69 tcaccttagca tttgtatatt ttttccttgc cctgtactt ggacttttga tagttctata 2220  
 70 agaataaggc ttttccttcc ctggggcatg agtcagatac acaaggaccc ttcaggtgtt 2280  
 71 actagaaggc gtccatgttt attgtttttt aaagaatgtt tggcactctc taacgtccac 2340  
 72 tagcttactg agttatcagg tgcaggtcag actcttggct acagttagagag gcagcttcta 2400  
 73 ggcagagttt cttatgaaa gggtttgtaa tactttaaca accattaccc gtacctggcc 2460  
 74 tggcctccaa aatattaaca ttcttttctt gttgaaactc gcgagtgtaa ctttcataacc 2520  
 75 acttgaattt attgatattt aattatgaaa actagcatta cattattaaa cgatttctaa 2580  
 76 aatc 2584  
 78 <210> SEQ ID NO: 2  
 79 <211> LENGTH: 411  
 80 <212> TYPE: PRT  
 81 <213> ORGANISM: Homo sapiens  
 83 <400> SEQUENCE: 2  
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 85 1 5 10 15  
 86 Gly Glu Ser Ala Ala Gly Gly Ser Gly Ala Gly Gly Asp Ser Ala Ile  
 87 20 25 30  
 88 Glu Gln Gly Gly Gln Gly Ser Ala Leu Ala Pro Ser Pro Val Ser Gly  
 89 35 40 45  
 90 Val Arg Arg Glu Gly Ala Arg Gly Gly Arg Gly Arg Gly Arg Trp  
 91 50 55 60  
 92 Lys Gln Ala Gly Arg Gly Gly Val Cys Gly Arg Gly Arg Gly Arg  
 93 65 70 75 80  
 94 Gly Arg  
 95 85 90 95  
 96 Pro Pro Ser Gly Gly Ser Gly Leu Gly Asp Gly Gly Cys Gly  
 97 100 105 110  
 98 Gly Gly Gly Ser Gly Gly Gly Ala Pro Arg Arg Glu Pro Val Pro  
 99 115 120 125  
 100 Phe Pro Ser Gly Ser Ala Gly Pro Gly Pro Arg Gly Pro Arg Ala Thr  
 101 130 135 140  
 102 Glu Ser Gly Lys Arg Met Asp Cys Pro Ala Leu Pro Pro Gly Trp Lys  
 103 145 150 155 160  
 104 Lys Glu Glu Val Ile Arg Lys Ser Gly Leu Ser Ala Gly Lys Ser Asp  
 105 165 170 175  
 106 Val Tyr Tyr Phe Ser Pro Ser Gly Lys Lys Phe Arg Ser Lys Pro Gln  
 107 180 185 190

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108 Leu Ala Arg Tyr Leu Gly Asn Thr Val Asp Leu Ser Ser Phe Asp Phe  
 109 195 200 205  
 110 Arg Thr Gly Lys Met Met Pro Ser Lys Leu Gln Lys Asn Lys Gln Arg  
 111 210 215 220  
 112 Leu Arg Asn Asp Pro Leu Asn Gln Asn Lys Gly Lys Pro Asp Leu Asn  
 113 225 230 235 240  
 114 Thr Thr Leu Pro Ile Arg Gln Thr Ala Ser Ile Phe Lys Gln Pro Val  
 115 245 250 255  
 116 Thr Lys Val Thr Asn His Pro Ser Asn Lys Val Lys Ser Asp Pro Gln  
 117 260 265 270  
 118 Arg Met Asn Glu Gln Pro Arg Gln Leu Phe Trp Glu Lys Arg Leu Gln  
 119 275 280 285  
 120 Gly Leu Ser Ala Ser Asp Val Thr Glu Gln Ile Ile Lys Thr Met Glu  
 121 290 295 300  
 122 Leu Pro Lys Gly Leu Gln Gly Val Gly Pro Gly Ser Asn Asp Glu Thr  
 123 305 310 315 320  
 124 Leu Leu Ser Ala Val Ala Ser Ala Leu His Thr Ser Ser Ala Pro Ile  
 125 325 330 335  
 126 Thr Gly Gln Val Ser Ala Ala Val Glu Lys Asn Pro Ala Val Trp Leu  
 127 340 345 350  
 128 Asn Thr Ser Gln Pro Leu Cys Lys Ala Phe Ile Val Thr Asp Glu Asp  
 129 355 360 365  
 130 Ile Arg Lys Gln Glu Glu Arg Val Gln Gln Val Arg Lys Lys Leu Glu  
 131 370 375 380  
 132 Glu Ala Leu Met Ala Asp Ile Leu Ser Arg Ala Ala Asp Thr Glu Glu  
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 135 405 410  
 138 <210> SEQ ID NO: 3  
 139 <211> LENGTH: 1953  
 140 <212> TYPE: DNA  
 141 <213> ORGANISM: Mus musculus  
 143 <220> FEATURE:  
 144 <221> NAME/KEY: misc\_feature  
 145 <222> LOCATION: (0)...(0)  
 146 <223> OTHER INFORMATION: cDNA MBD2/dMTase  
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 151 ttagtgcgttc ggcgttcccc cgcgcggccgc tctgcgggctc gggcggtctt cggggattcc 180  
 152 aagggtctgg gttacgaaaga agcgcagagc cggctggga gggggctgga tgcgcgcga 240  
 153 cccggggggga ggccgtctgc gcccggagca ggaggagggg gagagcgcgg cgggcggcag 300  
 154 cggcgtggc ggcgactccg ccatagagaca gggggccag ggcagcgcgc tcgtccgtc 360  
 155 cccgggtgagc ggcgtgcga gggaaaggcgc tcggggcggc ggcgtggcc gggggcggtg 420  
 156 gaagcaggcg gcccggggcg gcgccgtctg tggccgtggc cgtggccgtg gccggggctg 480  
 157 gggccgtggc cggggccggg gcccggggccg cggccgtccc cagagtggcg gcaagcggact 540  
 158 tggccggcgac ggcggccggc ggcggggccgg ctgcggcgtc ggcagcggtg gccggcgtcgc 600  
 159 ccccccggcg gatccgttcc ctttccccgtc ggggagctcg gggccggggc ccaggggacc 660  
 160 ccggggccacg gagagcggga agaggatgga ctgccccggcc ctcccccccg gatggaagaa 720

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161 ggaggaagtg atccgaaaat cagggctca tagctggcaag agcgatgtct actacttcag 780  
162 tccaagtggta aagaagttca gaagtaaacc tcagctggca agataacctgg gaaatgctgt 840  
163 tgaccttagc agtttgact tcaggaccgg caagatgatg cctagtaaat tacagaagaa 900  
164 caagcagaga ctccgaaatg acccccctcaa tcagaacaag ggtaaaccag acctgaacac 960  
165 aacattgcca attagacaaa ctgcatcaat tttcaagcaa ccagtaacca aattcacgaa 1020  
166 ccacccgagc aataaggtga agtcagaccc ccagcggatg aatgaacaac cacgtcagct 1080  
167 ttctggggag aagaggctac aaggacttag cgcatcagat gtaacagaac aaattataaa 1140  
168 aaccatggag ctacctaaag gtcttcaagg agtcggtcca ggttagcaatg acgagaccct 1200  
169 tctgtctgtc gtggccagtg ctttacacac aagctctgcg cccatcacag gacaagtctc 1260  
170 tgctgcccgtg gaaaagaacc ctgctgttg gcttaacaca tctcaacccc tctgcaaagc 1320  
171 ttcatgtt acagatgaag acattaggaa acaggaagag cgagtccaa aagtacgcaa 1380  
172 gaaactggag gaggcactga tggccgacat cctgtcccgg gctgcggaca cggaggaagt 1440  
173 agacattgac atggacagtg gagatgaggc gtaagaatata gatcaggtaa ctttcgactg 1500  
174 acctccccca agagcaaatt gctagaaaca gaattaaaac atttccactg ggttcgcct 1560  
175 gtaagaaaaaa gtgtacctga gcacatagct ttttaatagc actaaccaat gccttttag 1620  
176 atgtatttt gatgtatata tctattattc caaatgatgt ttatttgaa tccttaggact 1680  
177 taaaatgagt ctttataat agcaagcagg gcccctccgg tgcagtgcg ctttgaggcc 1740  
178 aggtgcagtc tactgaaag gtagcactt cgtgaaatata ttgtttcccc cacagttta 1800  
179 atataaacag atcaggagta ccaaataagt ttcccaatta aagattatta tacttcactg 1860  
180 tatataaaaca gattttata ctttattgaa agaagatacc tgtacattct tccatcatca 1920  
181 ctgtaaagac aaataaatga ctatattcac aga 1953  
183 <210> SEQ ID NO: 4  
184 <211> LENGTH: 414  
185 <212> TYPE: PRT  
186 <213> ORGANISM: Mus musculus  
188 <400> SEQUENCE: 4  
189 Met Arg Ala His Pro Gly Gly Gly Arg Cys Cys Pro Glu Gln Glu Glu  
190 1 5 10 15  
191 Gly Glu Ser Ala Ala Gly Gly Ser Gly Ala Gly Gly Asp Ser Ala Ile  
192 20 25 30  
193 Glu Gln Gly Gly Gln Gly Ser Ala Leu Ala Pro Ser Pro Val Ser Gly  
194 35 40 45  
195 Val Arg Arg Glu Gly Ala Arg Gly Gly Arg Gly Arg Gly Arg Trp  
196 50 55 60  
197 Lys Gln Ala Ala Arg Gly Gly Val Cys Gly Arg Gly Arg Gly Arg  
198 65 70 75 80  
199 Gly Arg  
200 85 90 95  
201 Pro Gln Ser Gly Gly Ser Gly Leu Gly Gly Asp Gly Gly Gly Ala  
202 100 105 110  
203 Gly Gly Cys Gly Val Gly Ser Gly Gly Val Ala Pro Arg Arg Asp  
204 115 120 125  
205 Pro Val Pro Phe Pro Ser Gly Ser Ser Gly Pro Gly Pro Arg Gly Pro  
206 130 135 140  
207 Arg Ala Thr Glu Ser Gly Lys Arg Met Asp Cys Pro Ala Leu Pro Pro  
208 145 150 155 160  
209 Gly Trp Lys Lys Glu Glu Val Ile Arg Lys Ser Gly Leu Ser Ala Gly  
210 165 170 175  
211 Lys Ser Asp Val Tyr Tyr Phe Ser Pro Ser Gly Lys Phe Arg Ser

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212          180          185          190
213 Lys Pro Gln Leu Ala Arg Tyr Leu Gly Asn Ala Val Asp Leu Ser Ser
214          195          200          205
215 Phe Asp Phe Arg Thr Gly Lys Met Met Pro Ser Lys Leu Gln Lys Asn
216          210          215          220
217 Lys Gln Arg Leu Arg Asn Asp Pro Leu Asn Gln Asn Lys Gly Lys Pro
218 225          230          235          240
219 Asp Leu Asn Thr Thr Leu Pro Ile Arg Gln Thr Ala Ser Ile Phe Lys
220          245          250          255
221 Gln Pro Val Thr Lys Phe Thr Asn His Pro Ser Asn Lys Val Lys Ser
222          260          265          270
223 Asp Pro Gln Arg Met Asn Glu Gln Pro Arg Gln Leu Phe Trp Glu Lys
224          275          280          285
225 Arg Leu Gln Gly Leu Ser Ala Ser Asp Val Thr Glu Gln Ile Ile Lys
226          290          295          300
227 Thr Met Glu Leu Pro Lys Gly Leu Gln Gly Val Gly Pro Gly Ser Asn
228 305          310          315          320
229 Asp Glu Thr Leu Leu Ser Ala Val Ala Ser Ala Leu His Thr Ser Ser
230          325          330          335
231 Ala Pro Ile Thr Gly Gln Val Ser Ala Ala Val Glu Lys Asn Pro Ala
232          340          345          350
233 Val Trp Leu Asn Thr Ser Gln Pro Leu Cys Lys Ala Phe Ile Val Thr
234          355          360          365
235 Asp Glu Asp Ile Arg Lys Gln Glu Glu Arg Val Gln Gln Val Arg Lys
236          370          375          380
237 Lys Leu Glu Glu Ala Leu Met Ala Asp Ile Leu Ser Arg Ala Ala Asp
238 385          390          395          400
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245 <212> TYPE: DNA
246 <213> ORGANISM: Artificial Sequence
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249 <223> OTHER INFORMATION: Antisense oligonucleotide
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256 <212> TYPE: DNA
257 <213> ORGANISM: Artificial Sequence
259 <220> FEATURE:
260 <223> OTHER INFORMATION: Antisense oligonucleotide
262 <400> SEQUENCE: 6
263 cttccctcctt cttccatc          18
265 <210> SEQ ID NO: 7
266 <211> LENGTH: 17
267 <212> TYPE: DNA
268 <213> ORGANISM: Artificial Sequence

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**VERIFICATION SUMMARY**

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Input Set : A:\Sequence Listing\_26473U\_11-11\_05.txt  
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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date